

quantities for the same purposes to maintain urban landscapes. Synthetic organic chemicals such as TCE are used to clean suburban and rural septic tank waste disposal systems. Salt applied to roadways, waste oils, brake lining materials, road oils, and urban runoff also contribute to ground water degradation.

These sources are more difficult to control than point source pollution since contamination from them occurs on a widespread basis. Control requires regulations to restrict the use of hazardous chemicals or provide incentives to minimize discharge of these contaminants.

#### Agricultural Pesticides Applied to Land

Agricultural pesticides applied to the land are distinct from other types of ground water contaminants in that they include "economic poisons," which are designed to be toxic and are applied to large areas of the environment. Besides ground water contamination, these chemicals can adversely affect workers, air and surface water quality, and consumers of food products.

Pesticide contamination is a serious problem in many areas of the country. In Long Island, New York, almost 2000 private drinking water wells have been contaminated with aldicarb (trade name Temik), an insecticide and nematicide. About 1000 of these wells have aldicarb concentrations that exceed the New York water quality standard of 7 ppb (parts per billion). Nine other pesticides have been detected in Long Island wells. Since 1979 almost 2500 wells in California have been found to be contaminated with dibromochloropropane (DBCP), including at least 1473 wells that exceed the California Department of Health Services standard of 1 ppb. Aldicarb has also been found in 24 wells in Del Norte County, California. Ground water contamination from EDB, 1,2-D and simazine has been traced to lawful agriculture use in California. There has also been ground water contamination from improper disposal at pesticide manufacturing plants.

In a sampling of 70 public wells in Iowa, atrazine was found in 24 wells (34.2 percent) of 14 water supplies (35.96 percent). Monitoring also detected cyanazine, alachlor, metolachlor, and fonofos. In contrast to the situation in Long Island and California, all the concentrations detected in Iowa were below federal and Iowa water quality standards. It is possible that many more pesticides make their way into the ground water, but the difficulty and expense of detection keeps them hidden.

The extraordinary advances in detection equipment within the last decade now allow discovery of contamination at levels below most current health advisory levels. But the widespread application of chemicals makes detection expensive and difficult to plan. Thus, low levels of nonpoint con-